

## WHAT IS CLAIMED IS:

1. A method for transforming an *Allium* species with a heterologous gene, the method comprising the step of: contacting embryogenic callus material from an *Allium* species with a bacterium belonging to the genus *Agrobacterium* which contains a heterologous gene.
2. The method of claim 1 wherein the *Allium* species is *Allium cepa* or *Allium fistulosum*.
3. The method of claim 1 wherein the bacterium belonging to the genus *Agrobacterium* is *Agrobacterium rhizogenes* or *Agrobacterium tumefaciens*.
4. The method of claim 1 wherein the bacterium belonging to the genus *Agrobacterium* contains a Ti plasmid or a Ri plasmid.
5. The method of claim 1 wherein the heterologous gene is the EPSPS gene.
6. The method of claim 5 wherein the heterologous gene is a modified EPSPS gene.
7. The method of claim 1 wherein the embryogenic callus material is derived from immature embryos or flower buds from an *Allium* species.
8. An *Allium* species transformed by the method of claim 1 and progeny thereof.
9. A method for transforming an *Allium* species with a heterologous gene, the method comprising the steps of:
  - a. culturing immature embryos or flower buds from an *Allium* species on an initiation medium for a period of from about 2 to about 6 months until embryogenic callus material forms on the embryos or flower buds;

b. transferring the embryogenic callus material to a coculture medium and contacting the embryogenic callus material with a suspension of *Agrobacterium rhizogenes* or *Agrobacterium tumefaciens* containing a heterologous gene;

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c. incubating the embryogenic callus material with the *Agrobacterium rhizogenes* or *Agrobacterium tumefaciens* for a period of from about 2 to about 4 days; and

d. removing the *Agrobacterium rhizogenes* or *Agrobacterium tumefaciens* from  
10 the transformed embryogenic callus material.

10. The method of claim 9 wherein the *Allium* species is *Allium cepa* or *Allium fistulosum*.

15 11. The method of claim 9 wherein the immature embryos or flower buds are cultured on the initiation medium in the dark and at a temperature of from about 25°C to about 30°C.

20 12. The method of claim 9 wherein the heterologous gene is the EPSPS gene.

13. The method of claim 12 wherein the heterologous gene is a modified EPSPS gene.

25 14. The method of claim 9 further comprising the step of regenerating the transformed embryogenic callus material into transformed *Allium* plants containing the heterologous gene.

15. An *Allium* species transformed by the method of claim 9 and progeny thereof.